

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. **HSJ920040056US1**  
First Inventor **Matthew J. Carey**  
Title **CURRENT-PERPENDICULAR-TO-PLANE MAGNETORESISTIVE SENSOR WITH  
FREE LAYER STABILIZED BY IN-STACK ORTHOGONAL MAGNETIC COUPLING**  
Express Mail Label No. **ER 265251618 US**

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **24**]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **6**]
5. Oath or Declaration [Total Pages **3**]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
  - ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_ / \_\_\_\_\_

Prior application information: Examiner: \_\_\_\_\_ Group Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

☐ Customer Number or Bar Code Label **(Insert Customer No. or Attach bar code label here)** or ☒ Correspondence address below

Name, **Thomas R. Berthold**

Address **18938 Congress Junction Ct.**

City **Saratoga** State **CA** Zip Code **95070**

Country **USA** Telephone **(408) 396-8411** Fax **(408) 904-6605**

Name (Print/Type) **Lewis L. Nunnelley** Registration No. (Attorney/Agent) **42,942**

Signature *[Signature]* Date **3/16/04**

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PTO/SB/17 (10-01)

Approved for use through 07/31/2006. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

# FEE TRANSMITTAL for FY 2004

Patent fees are subject to annual revision.

## Complete if Known

Application Number	
Filing Date	
First Named Inventor	Matthew J. Carey
Examiner Name	
Group Art Unit	
Attorney Docket No.	HSJ920040056US1

TOTAL AMOUNT OF PAYMENT (\$) 1188.00

## METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number: 502587  
Deposit Account Name: Hitachi Global Storage Technologies

- ☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17  
☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☐ Payment Enclosed:

☐ Check ☐ Credit card ☐ Money Order ☐ Other

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	770.00
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	

SUBTOTAL (1) (\$) 770.00

### 2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
41	-20** = 21	18.00	378.00
3	-3** = 0	86.00	0.00
Multiple Dependent			

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 378.00

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1051 130	205 65	Surcharge - late filing fee or oath	
1052 50	227 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	139 130	Non-English specification	
1812 2,520	147 2,520	For filing a request for <i>ex parte</i> reexamination	
1804 920*	112 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
1251 110	215 55	Extension for reply within first month	
1252 420	216 205	Extension for reply within second month	
1253 950	217 465	Extension for reply within third month	
1254 1,480	218 725	Extension for reply within fourth month	
1255 2,010	228 985	Extension for reply within fifth month	
1401 330	219 160	Notice of Appeal	
1402 330	220 160	Filing a brief in support of an appeal	
1403 290	221 140	Request for oral hearing	
1451 1,510	138 1,510	Petition to institute a public use proceeding	
1452 110	240 55	Petition to revive - unavoidable	
1453 1,330	241 650	Petition to revive - unintentional	
1501 1,330	242 650	Utility issue fee (or reissue)	
1502 480	243 235	Design issue fee	
1503 640	244 310	Plant issue fee	
1460 130	122 130	Petitions to the Commissioner	
1807 50	123 50	Processing fee under 37 CFR 1.17(q)	
1806 180	126 180	Submission of Information Disclosure Stmt	
8021 40	581 40	Recording each patent assignment per property (times number of properties)	40
1809 770	246 370	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810 770	249 370	For each additional invention to be examined (37 CFR § 1.129(b))	
1801 770	279 375	Request for Continued Examination (RCE)	
1802 900	169 900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 40.00

## SUBMITTED BY

Name (Print/Type)	Lewis L. Nunnelley	Registration No. (Attorney/Agent)	42,942	Telephone	(408) 717-6570
Signature		Date	3/16/04		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of :  
Matthew J. Carey et al. : Group Art Unit: Not Yet Assigned  
Serial No. Not Yet Assigned : Examiner: Not Yet Assigned

For: "Current-Perpendicular-To-Plane Magnetoresistive Sensor With Free Layer  
Stabilized By In-Stack Orthogonal Magnetic Coupling"

Assistant Commissioner of Patents and Trademarks  
Alexandria, VA 22313-1450

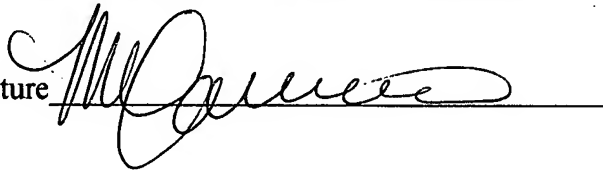
EXPRESS MAIL CERTIFICATE

I hereby certify that the above paper/fee is being deposited with the United States Postal Service  
as \_Express Mail Post Office to Addressee\_ service in an envelope addressed to the Assistant  
Commissioner for Patents and Trademarks, Alexandria, VA 22313-1450 on March 16, 2004.

Express Mail NO.: ER 265251618 US

Person mailing paper/fee: Mary Lou Domenici

Signature

A handwritten signature in dark ink, appearing to read "Mary Lou Domenici", is written over a horizontal line.